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1 New techniques and approaches: An end-to-end approach to globally 77%

scalable programmable networking

Micah Beck , Terry Moore , James S. Plank

Proceedings of the ACM SIGCOMM workshop on Future directions in network architecture August 2003

The three fundamental resources underlying Information Technology are bandwidth, storage, and computation. The goal of wide area infrastructure is to provision these resources to enable applications within a community. The end-to-end principles provide a scalable approach to the architecture of the shared services on which these applications depend. As a prime example, IP and the Internet resulted from the application of these principles to bandwidth resources. A similar application to storage r ...

2 Three ECL designs for microprogrammable Writable Control Stores 77%

J. F. McDonald , R. Harris , J. Sustman

Conference record of the 6th annual workshop on Microprogramming September 1973

Three designs are presented for extremely fast microprogrammed timing and control sequencers driven by Writable Control Stores. These designs have been put forth with a view towards utilizing existing or impending developments in the field of Emitter Coupled Logic (ECL). One of the designs is directly applicable to an existing ECL minicomputer architecture (that of the Digital Scientific META-4). The other two are more conjectural. One of these modules has a parts cost of roughly only &doll ...

3 Session 7: rendering: Shear-image order ray casting volume rendering 77%

Yin Wu , Vishal Bhatia , Hugh Lauer , Larry Seiler

Proceedings of the 2003 symposium on Interactive 3D graphics April 2003

This paper describes shear-image order ray casting, a new method for volume rendering. This method renders sampled data in three dimensions with image quality equivalent to the best of ray-per-pixel volume rendering algorithms (full image order), while at the same time retaining computational complexity and spatial coherence near

to that of the fastest known algorithm (shear-warp). In shear-image order, as in shear-warp, the volume data set is resampled along slices parallel to a face of the vol ...

4 Session 4: Optimal organizations for pipelined hierarchical memories 77%



Gianfranco Bilardi , Kattamuri Ekanadham , Pratap Pattnaik

Proceedings of the fourteenth annual ACM symposium on Parallel algorithms and architectures August 2002

In a recent paper (SPAA'01), we have established that the Pipelined Hierarchical Random Access Machine (PH-RAM) is a powerful model of computation, where most of the memory latency can be hidden by concurrency of accesses. In the present work, we explore the physical feasibility of PH-RAMs. A pipelined hierarchical memory of size S is characterized by two metrics: the access function $a(x, S)$, denoting the time required by an access to location x , and the pipeline period $p(S)$, denoti ...

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des<and>pipeline processing

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permutation<and>substitution

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